QC ABSTRACT

NAME OF WORK: Construction of BBMP Help Point at Ramachanadra in Ward No.11 (Kuvempunagara), Vidyaranyapura Sub Division.

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	Block(400*150*200)	BLOCK DENSITY	One Test		1	1
		WATER ABSORPTION	One Test		1	1
		DIMENSION ANALYSIS	One Test		1	1
		COMPRESSIVE STRENGTH	One Test		1	1
7	RMC(M20)	Compressive Strength(7days and 28days)	3 set /16-30 cum	27.52	6	6
8	Mortar Sand	Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		Compacted Bulk Density	One Test		1	1
		Loose Bulk Density	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
9	Plaster Sand	Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2020-03-03-05** **Date: 03-10-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.
Agency	:	Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024
Customer's Reference	:	BBMP/EE/BTP/WO/103/2019-20
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	01-10-19
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	30-09-19

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	245	245	1.6	98.4	90-100
3	20 mm	7875	8120	54.1	45.9	30-70
4	10 mm	3899	12019	80.1	19.9	10-35
5	4.75 mm	2588	14607	97.4	2.6	0-5
6	Pan	393	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-03-03-05** **Date: 03-10-19**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.4	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.9	
3	Specific Gravity	2.64	–
4	Bulk Density(Loose) (Kg/l)	1.38	–
5	Bulk Density(Compacted) (Kg/l)	1.45	–
6	Water Absorption(%)	0.22	–

Note:
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Authorized Signatory
Quality Manager

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Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2020-03-03-05** **Date: 03-10-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.
Agency	:	Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024
Customer's Reference	:	BBMP/EE/BTP/WO/103/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	01-10-19
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	01-10-19
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.76	–
2	Finess by Air permeablity method (m^2/kg,Min)	292.1	225m^2/kg, Min
3	Density (gm/cc)	3.12	–
4	Standard Consistency (%)	28.0%	Not specified
5	Initial Setting time	155 minutes	Not less than 30 minutes
6	Final Setting time	260 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	2mm	Not more than 10 mm

Note:

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2020-03-03-05** **Date: 29-10-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.
Agency	:	Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024
Customer's Reference	:	BBMP/EE/BTP/WO/103/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	01-10-19
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	01-10-19
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	58.5N/mm^2	Not less than 53 N/mm^2

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2020-03-03-05** **Date: 03-10-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.
Agency	:	Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024
Customer Reference	:	BBMP/EE/BTP/WO/103/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	01-10-19
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	30-09-19

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	298	298	6.0	94.0	90-100
3	10 mm	2645	2943	58.9	41.1	25-55
4	4.75 mm	1811	4754	95.1	4.9	0-10
5	Pan	246	5000	100	0	–

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-03-03-05** **Date: 03-10-19**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	8.9	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.4	
3	Specific Gravity	2.62	–
4	Bulk Density(Loose) (Kg/l)	1.42	–
5	Bulk Density(Compacted) (Kg/l)	1.48	–
6	Water Absorption(%)	0.35	–
7	Aggregate crushing Value(%)	24.8	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	25.1	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2020-03-03-05** **Date: 03-10-19**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.

Agency : Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024

Customer's Reference : BBMP/EE/BTP/WO/103/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 01-10-19

Sample Type : Fine Aggregate

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption

Date of test : 30-09-19

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	27	27	2.7	97.3	90-100	90-100	90-100	95-100
3	2.36 mm	55	82	8.2	91.8	60-95	75-100	85-100	95-100
4	1.18 mm	239	321	32.1	67.9	30-70	55-90	75-100	90-100
5	600 micron	205	526	52.6	47.4	15-34	35-59	60-79	80-100
6	300 micron	203	729	72.9	27.1	5-20	8-30	12-40	15-50
7	150 micron	191	920	92.0	8.0	0-10	0-10	0-10	0-15
8	Pan	80	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2020-03-03-05** **Date: 03-10-19**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.5	–
2	Specific Gravity	2.59	–
3	Material finer than 75 micron(%)	6.9	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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Quality Manager

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TEST REPORT ON PHYSICAL REQUIREMENTS OF SOLID CONCRETE BLOCKS

Lab ID	:	**CP-2020-03-03-05** **Date: 04-10-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.
Agency	:	Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024
Customer's Reference	:	BBMP/EE/BTP/WO/103/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	01-10-19
Sample Type/Size	:	Solid concrete blocks size (400X150X200)mm
Reference to BIS codes	:	IS : 2185 (Part 1) : 2005(RA 2010) Concrete Masonry Specification Part 1:Hollow and Solid Concrete Blocks (Dimensions -Annex-B, Clause 9.2 and 10 , Block density Annex -C Clause 9.3 and10, Compressive strength Annex -D Clause 9.4 and 10, Water absorption Annex -E Clause 9.5 and 10)
Date of test	:	01-10-19

BLOCK DENSITY:

Sl. No.	Measurement of overall Dimensions of Individual Blocks			Overall Volume of the Block in Cubic Centimetres	Weight of Oven Dried Block in Kilograms to the nearest 10 Gram	Block Density in Kg/cum*10^6	Avg.Block Density in (Kg/cum)	As per IS 2185(Part 1) :2005 (RA 2010)
	Length	Breadth	Height					
	mm	mm	mm	(Cm^3)	Kg	Kg/m^3	Kg/m^3	
1	399	149	202	12009	32.816	2732.6	2743.5	Not less than 1800Kg/m^3
2	403	150	203	12271	33.500	2729.9		
3	402	151	199	12080	33.436	2767.9		

WATER ABSORPTION:

Sl. No.	Wet weight after water absorption	Dry weight (Oven dry)	Water Absorption	Avg.Water Absorption	As per IS 2185(Part 1):2005 (RA 2010)
	kg	kg	%	%	
1	33.91	32.25	4.89	4.25	Shall not be more than 10% by mass
2	33.57	32.14	4.28		
3	33.44	32.24	3.59		

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Lab ID : **CP-2020-03-03-05** **Date: 04-10-19**

DIMENSION ANALYSIS

Sl.no	Length mm	Breadth mm	Height mm	Requirement as per IS 2185(Part 1):2005
1	402	151	199	Length : ± 5mm Breadth : ± 3mm Height : ± 3mm
2	403	149	200	
3	402	150	200	
4	401	148	200	
5	403	150	200	
6	399	148	203	
7	403	150	203	
8	399	148	199	
9	401	151	199	
10	400	148	200	
11	401	148	202	
12	400	150	202	
13	401	148	203	
14	399	149	199	
15	403	151	201	
16	402	150	199	
17	401	151	201	
18	400	150	200	
19	403	148	200	
20	400	149	202	
Average of 20	**401**	**149**	**201**	

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Lab ID : **CP-2020-03-03-05** **Date: 04-10-19**

COMPRESSIVE STRENGTH:

Sl. No.	Size of solid block		Area	Failure Load	Compressive strength	Average Compressive strength
	Length	Breadth				
	mm	mm	(mm^2)	(KN)	N/mm^2	(N/mm^2)
1	402	151	60661	272.7	4.5	4.8
2	403	149	60071	294.5	4.9	
3	402	150	60236	270.3	4.5	
4	401	148	59374	291.4	4.9	
5	403	150	60427	274.7	4.5	
6	399	148	59082	294.6	5.0	
7	403	150	60472	293.8	4.9	
8	399	148	59071	293.0	5.0	

As per IS Requirements (Table 2, Clause 5.1, 5.2 and 9.4)

Compressive strength		
Grade	**Minimum average**	**Minimum Individual units.**
C (5.0)	5.00 N/mm^2	4.00 N/mm^2
C (4.0)	4.00 N/mm^2	3.20 N/mm^2

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TEST RESULTS OF STEEL

Lab ID : **CP-2020-03-03-05** **Date: 05-10-19**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.

Agency : Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024

Customer's Reference : BBMP/EE/BTP/WO/103/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 04-10-19

Sample Type : Sunvik

Reference to BIS codes : IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2012.

Date of test: : 04-10-19

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
			(mm)	(kg/m)	(N/mm2)	(N/mm2)	(%)		
1	Sunvik	Fe500	8	0.391	512	652	20.0%	Satisfactory	Satisfactory
2	Sunvik	Fe500	10	0.616	528	672	20.0%	Satisfactory	Satisfactory
3	Sunvik	Fe500	12	0.888	544	668	20.0%	Satisfactory	Satisfactory

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Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-03-03-05** **Date: 19/10/2019**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.

Agency : Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024

Customer's Reference : BBMP/EE/BTP/WO/103/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 14-10-19

Customer ID : RMC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 19/10/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	RMC	M20	12/10/2019	19/10/2019	151.16 X 151.68 X 149.16	22927	**8.842**	415.3	18.1	18.2
2	RMC	M20	12/10/2019	19/10/2019	151.83 X 150.71 X 150.58	22882	**8.388**	419.4	18.3	
3	RMC	M20	12/10/2019	19/10/2019	151.69 X 149.11 X 151.83	22619	**8.072**	408.3	18.0	

Note:

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Quality Manager

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HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-03-03-05** **Date: 09/11/2019**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.

Agency : Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024

Customer's Reference : BBMP/EE/BTP/WO/103/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 14-10-19

Customer ID : RMC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 09/11/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	RMC	M20	12/10/2019	09/11/2019	150.66 X 151.98 X 151.35	22898	**8.524**	531.4	23.2	23.1
2	RMC	M20	12/10/2019	09/11/2019	149.29 X 151.94 X 150.74	22684	**8.728**	510.7	22.5	
3	RMC	M20	12/10/2019	09/11/2019	151.91 X 149.66 X 150.97	22735	**8.339**	537.5	23.6	

Note:

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-03-03-05** **Date: 19/10/2019**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.

Agency : Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024

Customer's Reference : BBMP/EE/BTP/WO/103/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 14-10-19

Customer ID : RMC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 19/10/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	RMC	M20	12/10/2019	19/10/2019	150.45 X 149.92 X 150.30	22557	**8.842**	413.7	18.3	18.3
2	RMC	M20	12/10/2019	19/10/2019	150.50 X 149.60 X 149.08	22515	**8.388**	408.0	18.1	
3	RMC	M20	12/10/2019	19/10/2019	149.79 X 151.54 X 150.38	22699	**8.072**	419.9	18.5	

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-03-03-05** **Date: 09/11/2019**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.

Agency : Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024

Customer's Reference : BBMP/EE/BTP/WO/103/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 14-10-19

Customer ID : RMC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 09/11/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	RMC	M20	12/10/2019	09/11/2019	151.90 X 150.00 X 151.64	22785	**8.524**	536.5	23.5	23.1
2	RMC	M20	12/10/2019	09/11/2019	150.22 X 150.93 X 150.74	22673	**8.728**	511.5	22.6	
3	RMC	M20	12/10/2019	09/11/2019	149.53 X 150.62 X 151.62	22523	**8.339**	520.1	23.1	

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-03-03-05** **Date: 19/10/2019**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.

Agency : Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024

Customer's Reference : BBMP/EE/BTP/WO/103/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 14-10-19

Customer ID : RMC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 19/10/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	RMC	M20	12/10/2019	19/10/2019	150.25 X 149.55 X 151.39	22470	**8.842**	414.9	18.5	18.6
2	RMC	M20	12/10/2019	19/10/2019	151.90 X 151.83 X 151.93	23062	**8.388**	427.3	18.5	
3	RMC	M20	12/10/2019	19/10/2019	150.44 X 149.75 X 149.01	22528	**8.072**	423.2	18.8	

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-03-03-05** **Date: 09/11/2019**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Construction of BBMP Help Point at Ramachanadra in Ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.

Agency : Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024

Customer's Reference : BBMP/EE/BTP/WO/103/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 14-10-19

Customer ID : RMC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 09/11/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	RMC	M20	12/10/2019	09/11/2019	151.86 X 151.94 X 150.43	23074	**8.524**	547.2	23.7	23.0
2	RMC	M20	12/10/2019	09/11/2019	149.27 X 149.50 X 151.87	22315	**8.728**	495.9	22.2	
3	RMC	M20	12/10/2019	09/11/2019	150.13 X 150.80 X 149.60	22639	**8.339**	520.8	23.0	

Note:

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Format No: CP/TF/2017

TEST REPORT FOR SAND MASONRY MORTARS

Lab ID	:	**CP-2020-03-03-05** **Date: 19-12-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Construction of BBMP Help Point at Ramachanadra in ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.
Agency	:	Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024
Customer's Reference	:	BBMP/EE/BTP/WO/103/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	16-12-19
Sample Type	:	Fine Aggregate, M.Sand for Mortar
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2116-1980 (RA-2007) (Specification for Sand for Masonry Mortars) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	16-12-19
Total weight taken	:	1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS: 2116-1980 (RA-2007)
1	4.75 mm	0	0	0	100	100
2	2.36 mm	85	85	8.5	91.5	90-100
3	1.18 mm	200	285	28.5	71.5	70-100
4	600 micron	146	431	43.1	56.9	40-100
5	300 micron	116.5	547.5	54.8	45.3	5-70
6	150 micron	412.5	960	96.0	4.0	0-15
7	Pan	40	1000	100.0	0.0	0

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CIVIL PRO Sig..... Date..... BANGALORE

TEST REPORT FOR SAND MASONRY MORTARS

Lab ID : **CP-2020-03-03-05** **Date: 19-12-19**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	3.18	–
2	Specific Gravity	2.51	–
3	Material finer than 75 micron(%)	12.2	Crushed Fine aggregate Max 15%
4	*Compacted Bulk Density (Kg/litre)	1.90	–
5	*Loose Bulk Density (Kg/litre)	1.73	–

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Quality Manager

****End of Report****

Format No: CP/TF/2017

TEST REPORT FOR PLASTER SAND

Lab ID	:	**CP-2020-03-03-05** **Date: 25-10-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Construction of BBMP Help Point at Ramachanadra in ward No.11 (kuvempunagara), Vidyaranyapura Sub Division.
Agency	:	Sri. Brahamananda Reddy #56, 1st Cross, Yogeshnagara, Hebbal Kempapura, Bangalore-560024
Customer's Reference	:	BBMP/EE/BTP/WO/103/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	21-10-19
Sample Type	:	Plaster Sand
Reference to BIS codes	:	IS: 383 : 2016 (Specification for Coarse and fine Aggregates) IS1542:1992 (Sand for Plaster - Specification) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	21-10-19
Total weight taken	:	1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS: 2116-1980 (RA-2007)
1	10 mm	0	0	0	100	100
2	4.75 mm	35	35	3.5	96.5	95-100
3	2.36 mm	15	50	5	95	95-100
4	1.18 mm	50	100	10	90	90-100
5	600 micron	100	200	20	80	80-100
6	300 micron	215	415	41.5	58.5	20-65
7	150 micron	500	915	91.5	8.5	0-15
8	Pan	85	1000	100	0	---

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2020-03-03-05** **Date: 25-10-19**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.8	–
2	Specific Gravity	2.56	–
3	Material finer than 75 micron(%)	8.5	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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